R.F.I.

(REQUEST FOR INFORMATION)

Project #:	600-12-163	**RFI #:**	20
Project Name:	Bldg. 2, Correct Deficiencies	**Date Requested:**	4/26/13
Solicitation No.:	VA262-13-B-0184	**Reference:**	Metal Lockers
Drawing:	AE402	**Specification Section:**	10 51 13

DESCRIPTION OF PROBLEM OR INFORMATION REQUESTED

Please review Specification 10 51 13, Metal Lockers for the following questions:

1. Subsection 2.3. N. is calling for vertical center dividers. This requirement serves little purpose in lockers that are only twelve inches wide. Please confirm this section is not required for this project.
2. Subsection 2.2. D. 2. Is calling for the locker face frames to have vents. None of the major locker manufacturers make a locker with vented frames. Will solid, non-vented frames be acceptable?

OWNER RESPONSE

LAD Response:
This is a VA standard specification requirements. Any changes to this specification require VA approval. Provide cost according to project specification. Substitutions will be considered after the bid.

VALBHS RESPONSE: Concur with the above A/E Response without further comment or objection.

OWNER TRACKING No.:	**AMEND No.:**
VA Project Engineer/Manager: Geoffrey Wan **Geoffrey Wan, Architect | COR, VALBHS**	**Date:** May 1, 2013

A full height interstitial level serves as the dedicated space for all mechanical, electrical and plumbing distribution systems.

R.F.I.

(REQUEST FOR INFORMATION)

Project #:	600-12-163	**RFI #:**	22
Project Name:	Bldg. 2, Correct Deficiencies	**Date Requested:**	4/26/13
Solicitation No.:	VA262-13-B-0184	**Reference:**	Coiling Door
Drawing:	AE601	**Specification Section:**	10 51 00

DESCRIPTION OF PROBLEM OR INFORMATION REQUESTED

The coiling door is shown on AE100 under Sheet Specific 08 33 00.01 at Door D48-A. Door D48-A on the Door Schedule does not reflect this coiling door. Please advise on the correct door.

OWNER RESPONSE

LAD Response: See RFI 004. As shown on plan AE100, Door should be a 1-hr rated coiling door w/ Steel Frame (Type D). (E) wall condition will require infill.

VALBHS RESPONSE: Concur with the above A/E Response without further comment or objection.

OWNER TRACKING No.:	**AMEND No.:**
VA Project Engineer/Manager:	**Date:**
Geoffrey Wan	May 1, 2013
Geoffrey Wan, Architect | COR, VALBHS	

R.F.I.
(REQUEST FOR INFORMATION)

Project #:	600-12-163	**RFI #:**	#23
Project Name:	Bldg. 2, Correct Deficiencies	**Date Requested:**	4.29.2013
Solicitation No.:	VA262-13-B-0184	**Reference:**	
Drawing:		**Specification Section:**	

DESCRIPTION OF PROBLEM OR INFORMATION REQUESTED

Please be a specific as possible.

1. Section 102113 Toilet Compartments calls for metal and stainless steel toilet partitions. Finish Schedule calls out Trespa Phenolic Virtuon Metallics color Graphite Gray. Virtuon has a 30 sheet minimum order in ½" and ¾" thick which this project does not meet this minimum. Trespa does offer their Athlon line along with Formica line all with a similar graphite gray color. Please clarify if we are to bid per plans or by specifications.
2. Section 105113 Metal Lockers calls out on Plans the brand of Republic lockers with a color Sea Green and Midnight Blue. Is this to say that this is a proprietary specification and only these colors will be approved and other manufacturers' are eliminated from bidding that do not have this exact color?

OWNER RESPONSE

LAD Response:
1. The finish schedule is the basis of design. Provide cost based on the product specified in the finish schedule. Any substitutions will be evaluated after the bid.
2. Any manufacturer specified in the contract documents establishes the basis of design and performance criteria. Substitutions will be considered after the bid.

VALBHS RESPONSE: Concur with the above A/E Response without further comment or objection.

OWNER TRACKING No.:	**AMEND No.:**
VA Project Engineer/Manager: Geoffrey Wan Geoffrey Wan, Architect | COR, VALBHS	**Date:** May 1, 2013

R.F.I.

(REQUEST FOR INFORMATION)

Project #:	600-12-163	**RFI #:**	24
Project Name:	Bldg. 2, Correct Deficiencies	**Date Requested:**	April 29, 2013
Solicitation No.:	VA262-13-B-0184	**Reference:**	
Drawing:	AE100	**Specification Section:**	

DESCRIPTION OF PROBLEM OR INFORMATION REQUESTED

On Drawing AE100-Sheet Notes-#4, Says to provide and install new exterior aluminum windows at all existing locations. Is there a window schedule and more information regarding location and quantity.

OWNER RESPONSE

LAD Response:
Refer to project narrative. This note should be removed. Exterior windows are part of another project and are Not In Contract (NIC).

VALBHS RESPONSE: Concur with the above A/E Response without further comment or objection.

OWNER TRACKING No.:	**AMEND No.:**
VA Project Engineer/Manager: Geoffrey Wan **Geoffrey Wan, Architect | COR, VALBHS**	**Date:** May 1, 2013

R.F.I.

(REQUEST FOR INFORMATION)

Project #:	600-12-163	RFI #:	001 R 5
Project Name:	Bldg. 2, Correct Deficiencies	Date Requested:	04-29-2013
Solicitation No.:	VA262-13-B-0184	Reference:	Drawings
Drawing:	AD 106	Specification Section:	Demolition

DESCRIPTION OF PROBLEM OR INFORMATION REQUESTED

Demolition Plan for Roof is MISSING. Please provide us a copy.

OWNER RESPONSE

LAD Response: Demo Roof Plans are not missing. Due to the limited roof scope, enlarged roof plans are shown on AE405 and AE406 (overall plan reference provided on AE106). Due to the limited scope of work, no demo plan is shown for the roof over the Pharmacy area (ie. 8/AE405)- it is a roof replacement. Enlarged demo plans are provided as required for other areas where there is additional work - see AE406.

VALBHS RESPONSE: Concur with the above A/E Response without further comment or objection.

OWNER TRACKING No.:	AMEND No.:
VA Project Engineer/Manager: Geoffrey Wan Geoffrey Wan, Architect | COR, VALBHS	Date: May 1, 2013

R.F.I.

(REQUEST FOR INFORMATION)

Project #:	600-12-163	**RFI #:**	~~11~~ 26
Project Name:	Bldg. 2, Correct Deficiencies	**Date Requested:**	
Solicitation No.:	VA262-13-B-0184	**Reference:**	Duct Cleaning
Drawing:	MH100	**Specification Section:**	None

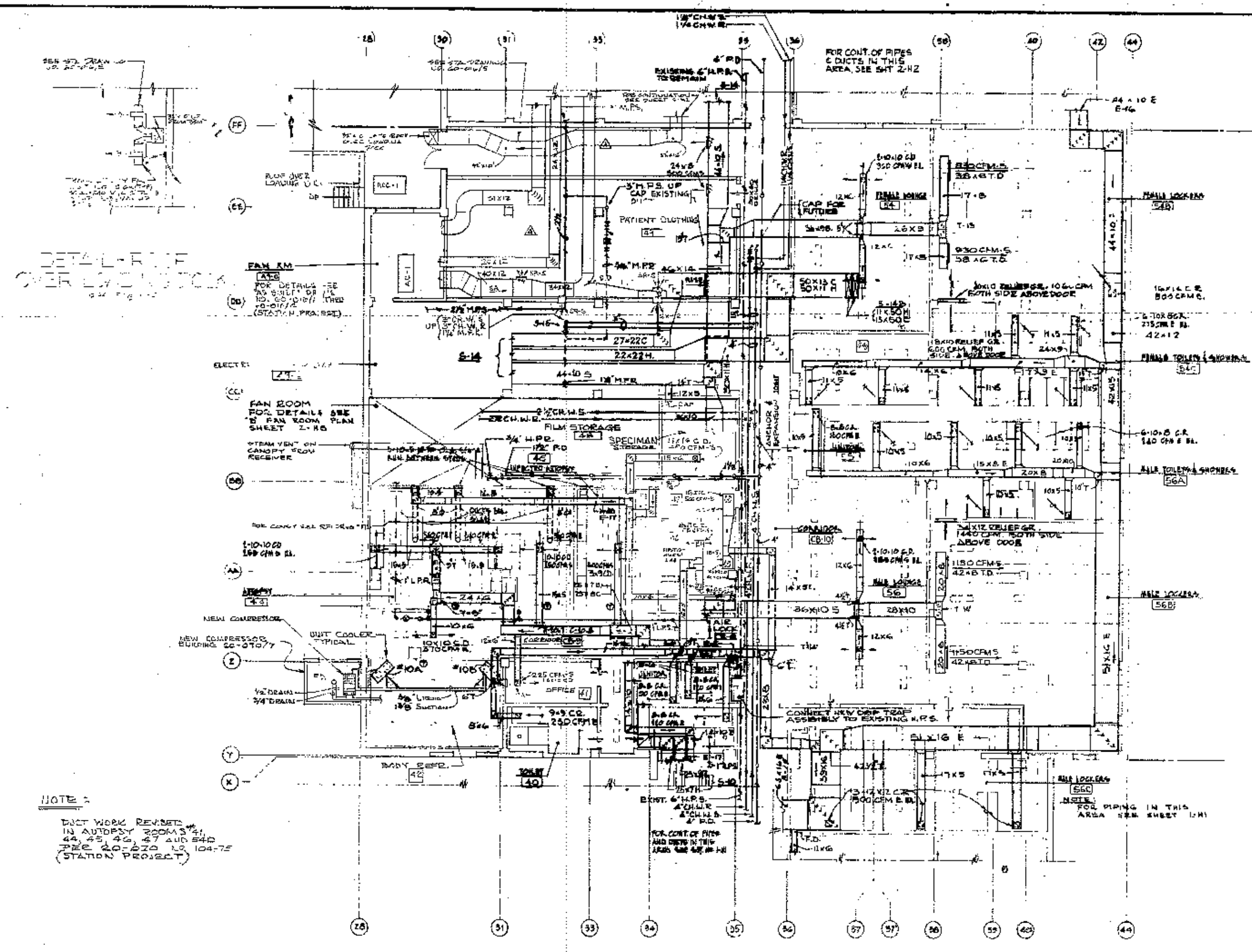
DESCRIPTION OF PROBLEM OR INFORMATION REQUESTED

Please see drawing MH100 Sheet Note 5 that states "After modification of ductwork is complete. Entire Duct System shall by cleaned. The entire duct system is not shown on the mechanical drawings so it is very difficult to put a price together. Please advise or provide as-built mechanical drawings.

OWNER RESPONSE

During design it was indicated that Duct Cleaning cost was determined by Building Floor Area. However, to provide better description of duct system to be cleaned attached to this RFI response are scans of As-Built drawings provided to design team by VALBHS. Also, indicated on these drawings are areas that are not to have duct cleaning due to work performed or being performed by other projects.
Kevin Gustin, d'Autremont-Helms, 05-03-2013

OWNER TRACKING No.:	**AMEND No.:**
VA Project Engineer/Manager:	**Date:**



AS BUILT DRAWING

GRAPHIC SCALE

KEY PLAN

HTG, VENT & AIR CONDITIONING
BASEMENT FLOOR PLAN-SOUTH
BLDG. 2 SCALE: 1/8"=1'-0"

700 BED G.M.&S. BUILDING
AND ALTERATIONS
TO BUILDINGS NOS. 1, 2, 7 & 8

VETERANS ADMINISTRATION
LONG BEACH, CALIFORNIA

DRAWN DY | PROJ. MGR. SMD | REVISIONS 8-28-73, 5-22-76
CHECKED | DATE AUG. 7, 1964

ADRIAN WILSON & ASSOCIATES
ARCHITECTS & ENGINEERS
LOS ANGELES, CALIFORNIA

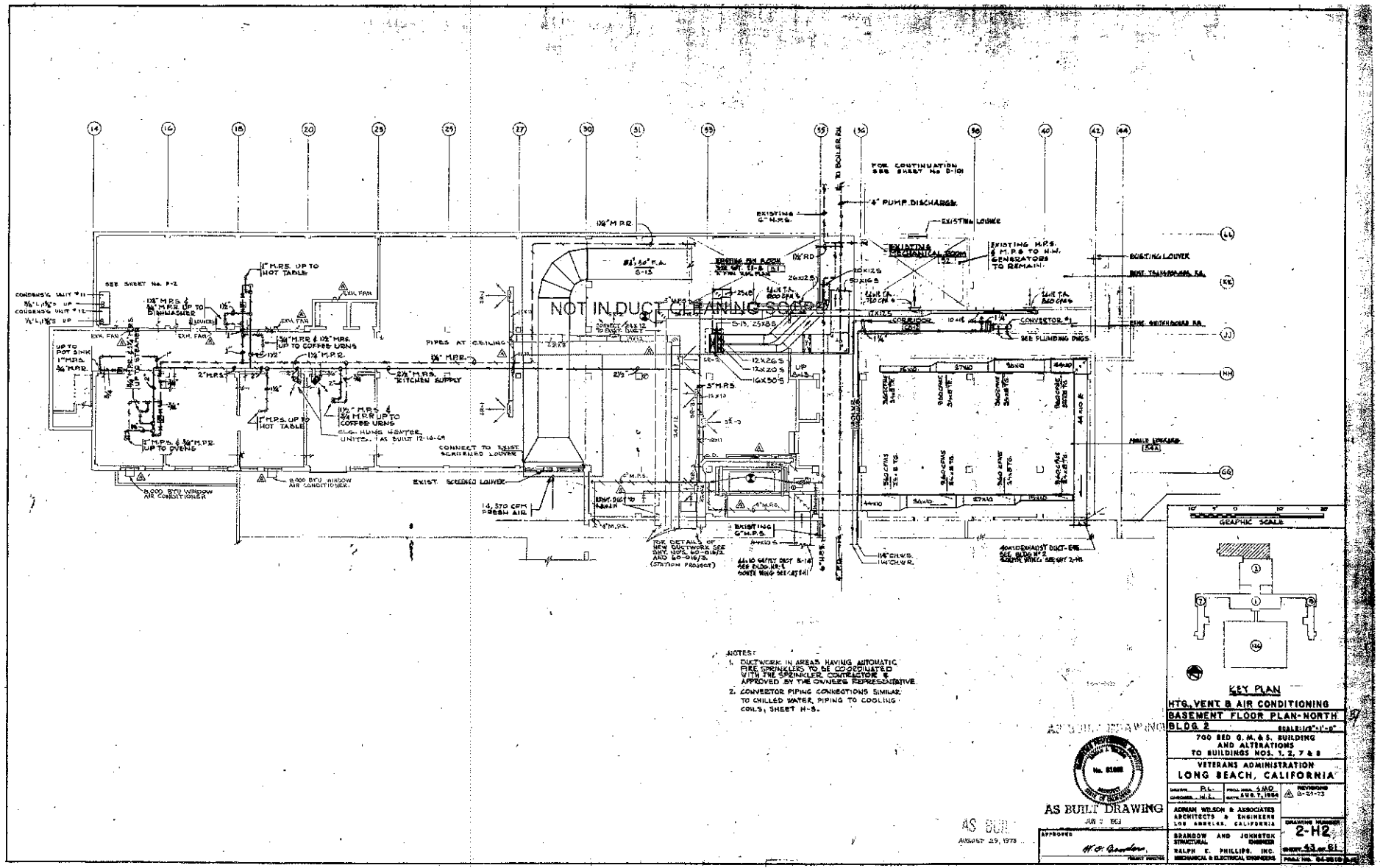
BRANDOW AND JOHNSTON STRUCTURAL ENGINEER
RALPH E. PHILLIPS, INC. MECHANICAL & ELECTRICAL ENGINEERS

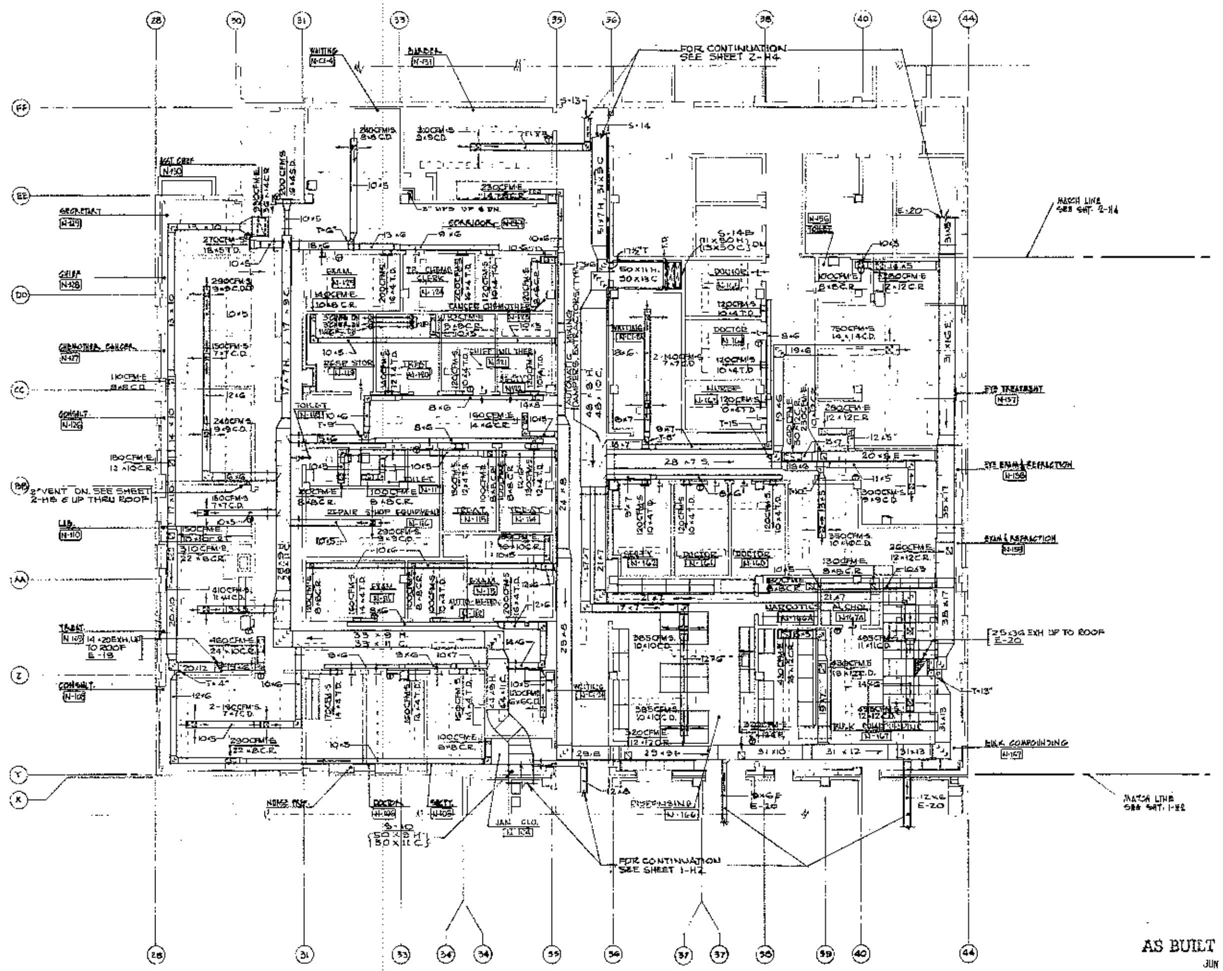
DRAWING NUMBER 2-H1
SHEET 42 OF 61
PROJ. NO.

APPROVED

FILE FOLD 4-2-14

04-6510
2-H1

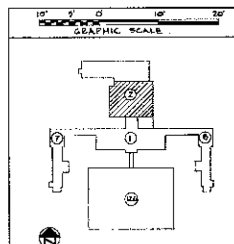

NOT IN DUCT CLEANING SCOPE
AS BUILT DRAWING
AUGUST 29, 1973
KEY PLAN
HTG. VENT & AIR CONDITIONING
BASEMENT FLOOR PLAN-NORTH
BLDG 2
700 BED G. M. & S. BUILDING AND ALTERATIONS TO BUILDINGS NOS. 1, 2, 7 & 8
VETERANS ADMINISTRATION
LONG BEACH, CALIFORNIA
ADRIAN WILSON & ASSOCIATES ARCHITECTS & ENGINEERS LOS ANGELES, CALIFORNIA
BRANDOW AND JOHNSTON STRUCTURAL ENGINEER
RALPH E. PHILLIPS, INC. MECHANICAL & ELECTRICAL ENGINEERS
DRAWING NUMBER 2-H2
SHEET 43 of 61
FILE FOLDER 42/3 A.C.



AS BUILT DRAWING

JUN 2 1969

No. B1662



KEY PLAN

HTG, VENT & AIR CONDITIONING
FIRST FLOOR PLAN-SOUTH
BLDG. 2 SCALE: 1/8"=1'-0"

700 BED G.M. & S. BUILDING AND ALTERATIONS TO BUILDINGS NOS. 1, 2, 7 & 8

VETERANS ADMINISTRATION
LONG BEACH, CALIFORNIA

DRAWN P.L. PROJ. MGR. SMD
CHECKED W.L. DATE AUG. 7, 1964

REVISIONS 4-2-16

ADRIAN WILSON & ASSOCIATES
ARCHITECTS & ENGINEERS
LOS ANGELES, CALIFORNIA

BRANDOW AND JOHNSTON STRUCTURAL ENGINEER
RALPH E. PHILLIPS, INC. MECHANICAL & ELECTRICAL ENGINEERS

DRAWING NUMBER 2-H3
SHEET 44 OF 61
PROJ. NO. 04-8510 A/E

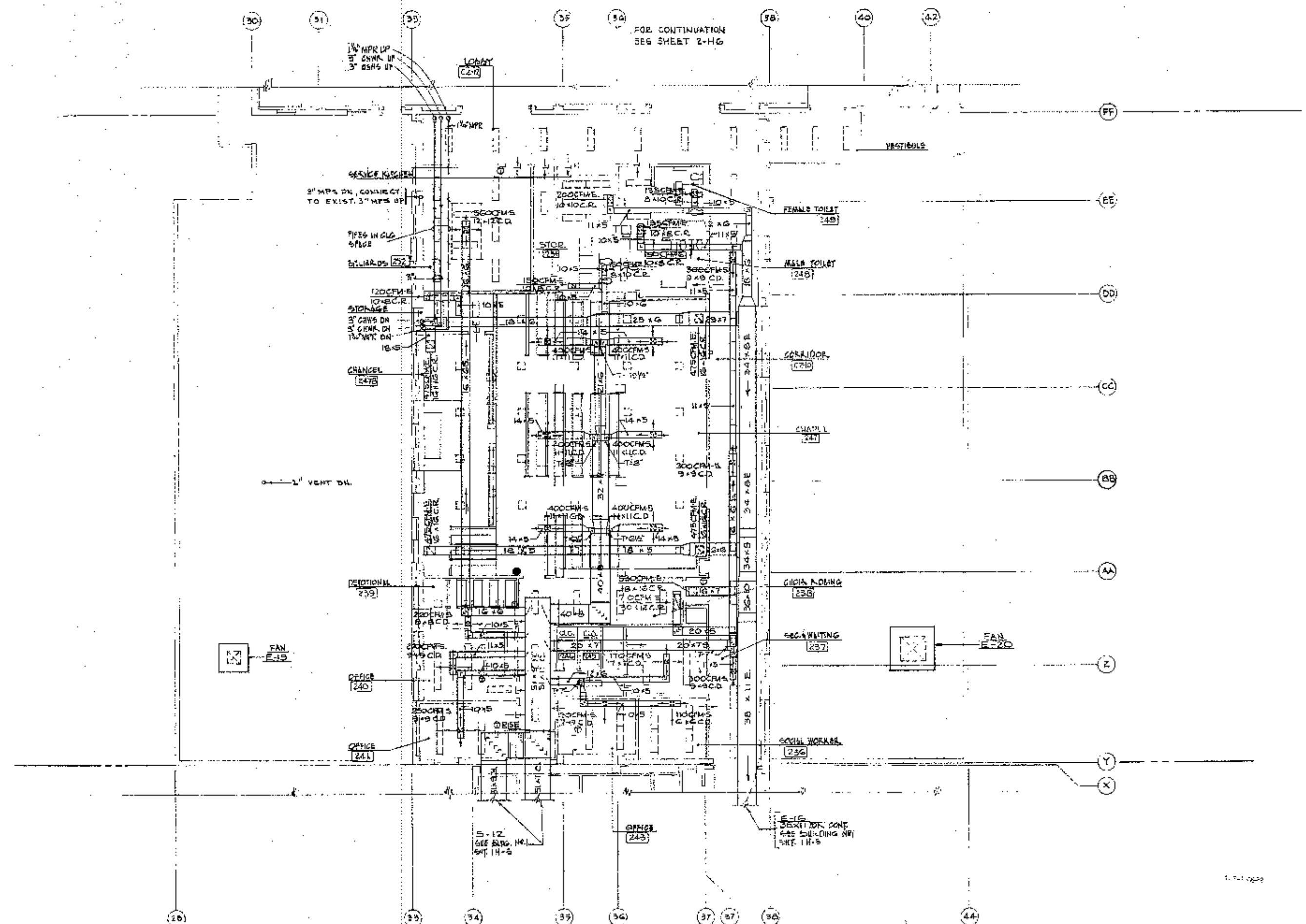
APPROVED
W. G. Brandow
PROJECT DIRECTOR

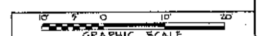
RETURN TRACINGS TO [illegible] FILES

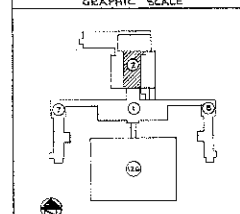
FILE FOLDER NO 2C

FIRST FLOOR PLAN - SOUTH (HVAC)
ALT. TO BLDG. NOS. 1, 2, 7, 8 + 126
B1-3-19
04-8510
2-H3

NOTE:
1. ALL STEAM PIPING TO CANTREN ABOVE FLOOR TO BE GALVANIZED.
2. CONNECTIONS TO HOODS BY OTHERS
EXTEND DUCTS TO 3' BELOW CEILING
NOT IN THIS CONTRACT
CLEANING SCOPE
KEY PLAN
HTG. VENT & AIR CONDITIONING
FIRST FLOOR PLAN - NORTH
BLDG. 2
700 BED G.M.&S. BUILDING,
AND ALTERATIONS
TO BUILDINGS NOS. 1, 2, 7 & 8
VETERANS ADMINISTRATION
LONG BEACH, CALIFORNIA
AS BUILT DRAWING
GRAPHIC SCALE
FILE FOLDER NO.
RETURN TRACINGS TO FILE FILES
2-H4







KEY PLAN

HTG. VENT & AIR CONDITIONING
SECOND FLOOR PLAN-SOUTH
BLDG. 2 SCALE 1/8"=1'-0"

700 BED G. M. & S. BUILDING AND ALTERATIONS TO BUILDINGS NOS. 1, 2, 7 & 8

VETERANS ADMINISTRATION
LONG BEACH, CALIFORNIA

DRAWN RL-DY PROJ. NO. SMD
CHECKED W.L. DATE AUG. 7, 1964

REVISIONS
81-3-22

ADRIAN WILSON & ASSOCIATES
ARCHITECTS & ENGINEERS
LOS ANGELES, CALIFORNIA

BRANDOW AND JOHNSTON STRUCTURAL ENGINEER
RALPH E. PHILLIPS, INC. MECHANICAL & ELECTRICAL ENGINEERS

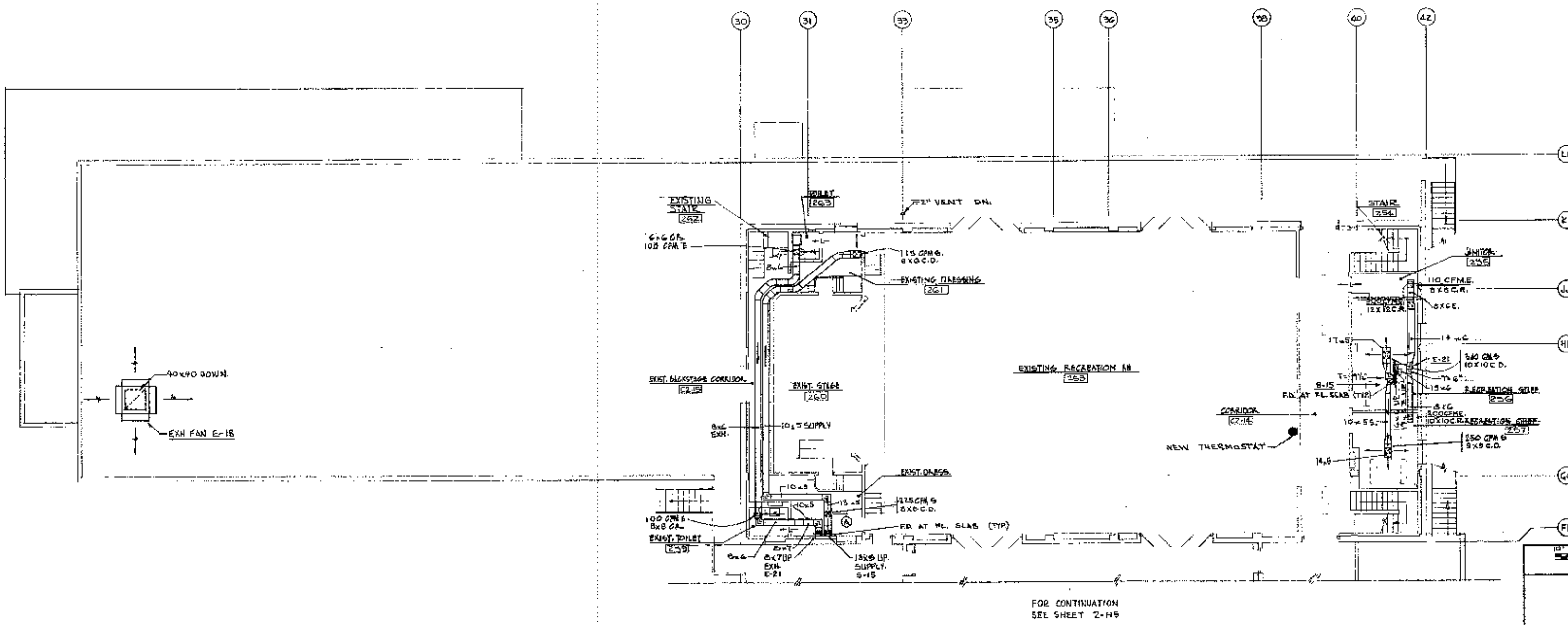
DRAWING NUMBER 2-H5
SHEET 46 OF 61
PROJ. NO. 04-5510 A/E

APPROVED
PROJECT DIRECTOR

AS BUILT DRAWING

No. B1662

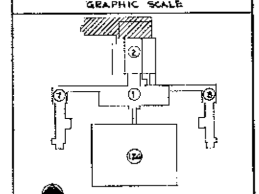
FILE FOLDER NO. 26



FOR CONTINUATION
SEE SHEET 2-H5

FOR CONTINUATION SEE SHEET 2-H5

GRAPHIC SCALE



KEY PLAN

AS BUILT DRAWING
JUN 2 1969

REGISTERED PROFESSIONAL ARCHITECT ADRIAN J. WILSON No. B1662 ARCHITECT STATE OF CALIFORNIA

APPROVED
PROJECT DIRECTOR

HTG, VENT. & AIR CONDITIONING
SECOND FLOOR PLAN-NORTH
BLDG. 2 SCALE 1/8"=1'-0"

700 BED G. M. & S. BUILDING
AND ALTERATIONS
TO BUILDINGS NOS. 1, 2, 7 & 8

VETERANS ADMINISTRATION
LONG BEACH, CALIFORNIA

DRAWN R.W. CHECKED W.L.	PROJ. MGR. A.M.O. DATE AUG. 7, 1964	REVISIONS B1-3-24
ADRIAN WILSON & ASSOCIATES ARCHITECTS & ENGINEERS LOS ANGELES, CALIFORNIA		DRAWING NUMBER 2-H6
BRANDOW AND JOHNSTON STRUCTURAL ENGINEER RALPH E. PHILLIPS, INC. MECHANICAL & ELECTRICAL ENGINEERS		SHEET 47 OF 81
		PROJ. NO. 04-5510 A/E

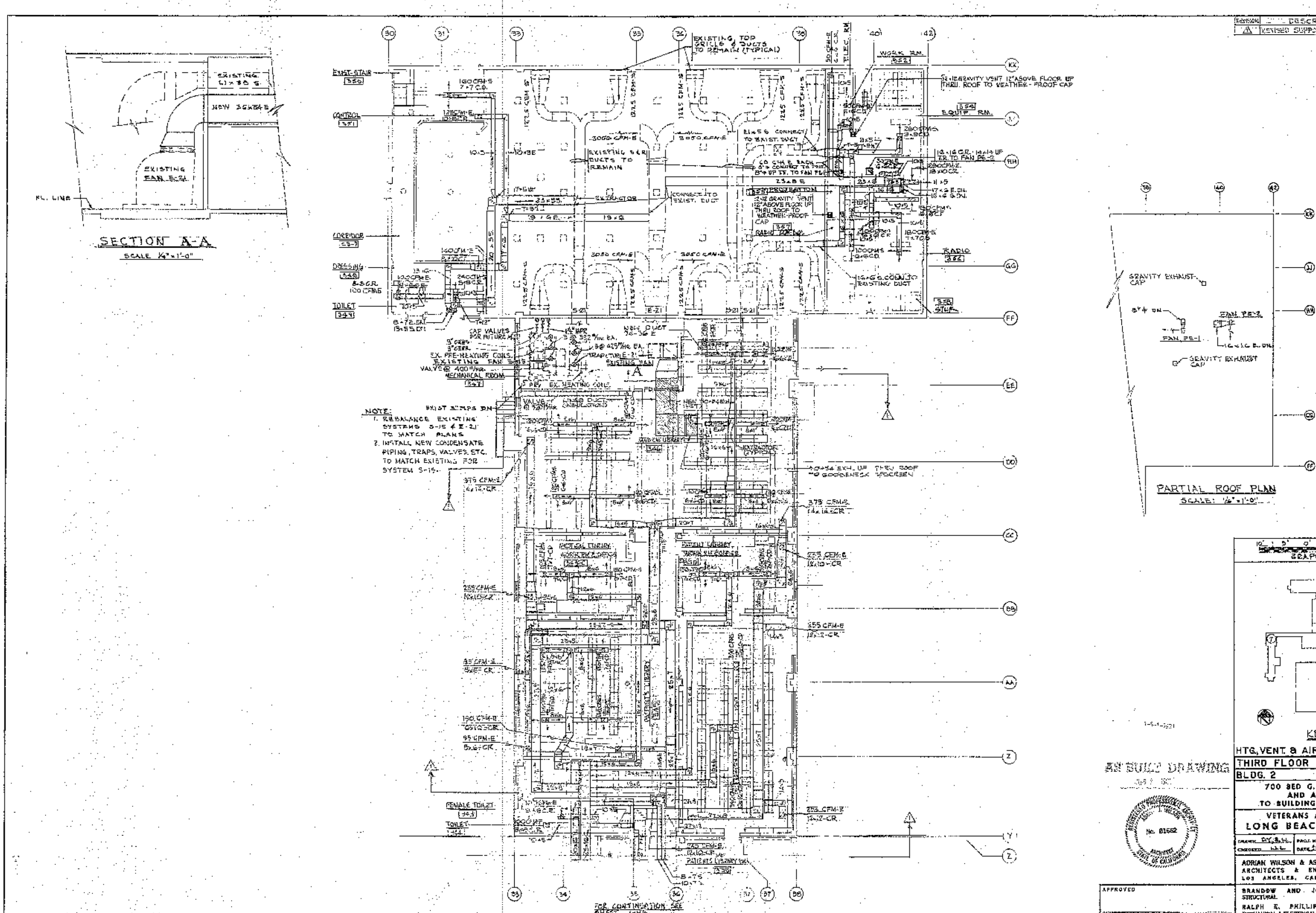
6

RETURN TRACINGS TO PLAN FILES

FILE FOLDER NO. 2C

SECOND FLOOR PLAN - NORTH (CHAPEL) B1-3-24
ALT.-TO BLDG. NOS. 1,2,7,8&12a

04-5510
2-H6



REVISION	DESCRIPTION	DATE
A	REVISED SUPPLY & RETURN AIR IN LIBRARY	9-15-61

GRAPHIC SCALE (1/8"=1'-0")

KEY PLAN

AS BUILT DRAWING

No. 81562 — REGISTERED PROFESSIONAL ARCHITECT — STATE OF CALIFORNIA

HTG, VENT. & AIR CONDITIONING

THIRD FLOOR PLAN-NORTH

BLDG. 2 SCALE: 1/8"=1'-0"

700 BED G. M. & S. BUILDING AND ALTERATIONS TO BUILDINGS NOS. 1, 2, 7 & 8

VETERANS ADMINISTRATION

LONG BEACH, CALIFORNIA

DRAWN: D.Y., B.H. — CHECKED: L.L.L. — PROJ. MGR.: A.M.D. — DATE: SEPT. 13, 1957

REVISIONS: 4-2-20

ADRIAN WILSON & ASSOCIATES ARCHITECTS & ENGINEERS LOS ANGELES, CALIFORNIA

BRANDOW AND JOHNSTON STRUCTURAL ENGINEER

RALPH E. PHILLIPS, INC. MECHANICAL & ELECTRICAL ENGINEERS

APPROVED

PROJECT DIRECTOR

DRAWING NUMBER 2-H7

SHEET 46 OF 61

PROJ. NO. 04-5510

RETURN TRACINGS TO PLAN FILES

FILE FOLDER NO. 26

5

THIRD FLOOR PLAN NORTH (HVAC) B1-3-26
ALT. TO BLDG. NOS. 1, 2, 7 & 8 /12G

04-5510
2-H7

Ceramic tiling is to be substituted with epoxy flooring on all floors at all of the restroom areas included in the scope of this project. The following drawing sheets will be effected:

Architectural:

AE402 ENLARGED RESTROOM PLANS
AE403 ENLARGED RESTROOM PLANS
AE407 INTERIOR ELEVATIONS
AE408 INTERIOR ELEVATIONS
AF100 ENLARGED FINISH PLAN, FINISH LEGEND, & FINISH SCHEDULE
Locker Room floors to remain as carpeting, unless substantial water ponding is anticipated.
Shower floor and base to be changed from ceramic tile to epoxy.
Specification Section 09 67 23.30, Resinous Flooring is attached.
Specification page 8, para 2.2 Base Cap Strip: Do not use metal cap strip adjacent to ceramic wall tile.

SECTION 09 67 23.30
RESIN (EPOXY RESIN COMPOSITION) MORTAR FLOORING (RES-3)

PART 1 - GENERAL

1.1 DESCRIPTION

This section specifies a seamless resinous (epoxy resin composition) and aliphatic poly urethane sealer, flooring systems with integral cove base.

1.2 RELATED WORK

A. Color and location of each type of resinous (epoxy resin composition) flooring: Section 09 06 00, SCHEDULE FOR FINISHES.

B. Floor Drains: Division 22, PLUMBING.

1.3 SUBMITTALS

A. Submit in accordance with Section 01 33 23, SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES.

B. Manufacturer's Literature and Data:

1. Description of each product to be provided.
2. Application and installation instructions.
3. Maintenance Instructions: Submit manufacturer's written instructions for recommended maintenance practices.

C. Qualification Data: For Installer.

D. Sustainable Submittal:

1. Product data for products having recycled content, submit documentation indicating percentages by weight of postconsumer and pre consumer recycled content.
   a. Include statements indicating costs for each product having recycled content, and low emitting materials.
2. Product data for Environmental Quality Credit EQ 4.2 low emitting materials, include printed statement of VOC content indicating compliance with environmental requirements.
3. Product data for Material Resource Credit MR 4.1, 12%-35% post-consumer recycled glass content.

E. Samples:

1. Each color and texture specified in Section 09 06 00, SCHEDULE FOR FINISHES.
2. Samples for verification: For each (color and texture) resinous flooring system required, 6 inches (152 mm) square, applied to a rigid backing by installer for this project.
3. Sample showing construction from substrate to finish surface in thickness specified and color and texture of finished surfaces.

Finished flooring must match the approved samples in color and texture.

F. Shop Drawings: Include plans, sections, component details, and attachment to other trades. Indicate layout of the following:
   1. Patterns.
   2. Edge configurations.

G. Certifications and Approvals:
   1. Manufacturer's certification of material and substrate compliance with specification.
   2. Manufacturer's approval of installer.
   3. Contractor's certificate of compliance with Quality Assurance requirements.

H. Warranty: As specified in this section.

1.4 QUALITY ASSURANCE

A. Manufacture Certificate: Manufacture shall certify that a particular resinous flooring system has been in use for a minimum of (5) five years.

B. Installer Qualifications: Engage an experienced installer (applicator) who is experienced in applying resinous flooring systems similar in material, design, and extent to those indicated for this project for a minimum period of (5) five years, whose work has resulted in applications with a record of successful in-service performance, and who is acceptable to resinous flooring manufacturer.
   1. Engage an installer who is certified in writing by resinous flooring manufacturer as qualified to apply resinous flooring systems indicated.
   2. Contractor shall have completed at least (5) five projects of similar size and complexity. Include list of at least (5) five projects. List must include owner (purchaser); address of installation, contact information at installation project site; and date of installation.
   3. Installer's Personnel: Employ persons trained for application of specified product.

C. Source Limitations:
   1. Obtain primary resinous flooring materials including primers, resins, hardening agents, grouting coats and finish or sealing coats from a single manufacturer.
   2. Provide secondary materials, including patching and fill material, joint sealant, and repair material of type and from source recommended by manufacturer of primary materials.

D. Pre-Installation Conference:

1. Convene a meeting not less than thirty days prior to starting work.
2. Attendance:
   a. Contractor
   b. VA Resident Engineer
   c. Manufacturer and Installer's Representative
3. Review the following:
   a. Environmental requirements
      1) Air and surface temperature
      2) Relative humidity
      3) Ventilation
      4) Dust and contaminates
   b. Protection of surfaces not scheduled to be coated
   c. Inspect and discus condition of substrate and other preparatory work performed
   d. Review and verify availability of material; installer's personnel, equipment needed
   e. Design and patternand edge conditions.
   f. Performance of the coating with chemicals anticipated in the area receiving the resinous (epoxy resin composition) flooring system
   g. Application and repair
   h. Field quality control
   i. Cleaning
   j. Protection of coating systems
   k. One-year inspection and maintenance
   l. Coordination with other work

E. Manufacturer's Field Services: Manufacturer's representative shall provide technical assistance and guidance for surface preparation and application of resinous flooring systems.

F. Contractor Job Site Log: Contractor shall document daily; the work accomplished environmental conditions and any other condition event significant to the long term performance of the resinous flooring systems installation. The Contractor shall maintain these records for one year after Substantial Completion.

1.5 MATERIAL PACKAGING DELIVERY AND STORAGE

A. Deliver materials to the site in original sealed packages or containers, clearly marked with the manufacturer's name or brand, type and color, production run number and date of manufacture.

B. Protect materials from damage and contamination in storage or delivery, including moisture, heat, cold, direct sunlight, etc.

C. Maintain temperature of storage area between 60 and 80 degrees F (15 and 26 degrees C).

D. Keep containers sealed until ready for use.

E. Do not use materials beyond manufacturer's shelf life limits.

F. Package materials in factory pre-weighed and in single, easy to manage batches sized for ease of handling and mixing proportions from entire package or packages. No On site weighing or volumetric measurements are allowed

1.6 PROJECT CONDITIONS

A. Environmental Limitations: Comply with resinous flooring manufacturer's written instructions for substrate temperature, ambient temperature, moisture, ventilation, and other conditions affecting resinous flooring applications.

1. Maintain material and substrate temperature between 65 and 85 degrees F (18 and 30 degrees C) during resinous flooring application and for not less than 24 hours after application.

B. Lighting: Provide permanent lighting or, if permanent lighting is not in place, simulate permanent lighting conditions during resinous flooring application.

C. Close spaces to traffic during resinous flooring application and for not less than 24 hours after application, unless manufacturer recommends a longer period.

D. Concrete substrate shall be properly cured for a minimum of 30 days. A vapor barrier must be present for concrete subfloors on or below grade. Otherwise, an osmotic pressure resistant grout must be installed prior to the resinous flooring.

1.7 WARRANTY

A. Work subject to the terms of the Article "Warranty of Construction" FAR clause 52.246-21.

B. Warranty: Manufacture shall furnish a single, written warranty covering the full assembly for both material and workmanship for a extended period of (3) full years from date of installation, or provide a joint and several warranty signed on a single document by manufacturer and applicator jointly and severally warranting the materials and workmanship for a period of (3) full years from date of installation. A sample warranty letter must be included with bid package or bid may be disqualified.

1.8 APPLICABLE PUBLICATIONS

A. The publication listed below form a part of this specification to the extent referenced. The publications are referenced in the text by the basic designation only.

B. American Society for Testing and Materials (ASTM):

B221-08.....Standard Specification for Aluminum and Aluminum-Alloy, Extruded Bars, Rods, Wire, Profiles and Tubes.

C307-03 (2008).....Standard Test Method for Tensile Strength of Chemical-Resistant Mortar, Grouts, and Monolithic Surfacings

C413-01(2006).....Standard Test Method for Absorption of Chemical-Resistant Mortars, Grouts, Monolithic Surfacings and Polymer Concretes

C531-00(R2005).....Standard Test Method for Linear Shrinkage and Coefficient of Thermal Expansion of Chemical-Resistant Mortars, Grouts, Monolithic Surfacings and Polymer Concretes

C579-01(2006).....Standard Test Method for Compressive Strength of Chemical-Resistant Mortars, Grouts, Monolithic Surfacings, and Polymer Concretes

C580-02(2008).....Standard Test Method for Flexural Strength and Modulus of Elasticity of Chemical-Resistant Mortars, Grouts, Monolithic Surfacings, and Polymer Concretes

C811-98(2008).....Standard Practice for Surface Preparation of Concrete for Application of Chemical-Resistant Resin Monolithic Surfacings

D1308-02(2007).....Standard Test Method for Effect of Household Chemicals on Clear and Pigmented Organic Finishes

D2240-05.....Standard Test Method for Rubber Property – Durometer Hardness

D4060-07.....Standard Test Method for Abrasion Resistance of Organic Coatings by the Taber Abraser

D4226-09.....Standard Test Methods for Impact Resistance of Rigid Poly (Vinyl Chloride) (PVC) Building Products

D7234-05.....Standard Test Method for Pull-Off Adhesion Strength of Coatings on Concrete Using Portable Pull-Off Adhesion Testers

F1869-09.....Standard Test Method for Measuring Moisture Vapor Emission Rate of Concrete Subfloor Using Anhydrous Calcium Chloride

F2170-09.....Standard Test Methods for Determining Relative Humidity in Concrete Floor Slabs Using Situ Probes

C. National Association of Architectural Metal Manufacturers (NAAMM):

AMP 500-06.....Finishes for Aluminum

PART 2 - PRODUCTS

2.1 SYSTEM DESCRIPTION FOR RESINOUS FLOORING

A. System Descriptions:

1. Monolithic, multi-component epoxy chemistry, steel trowel applied resinous flooring mortar system, nominal 3/16"/5mm thick system comprised of a penetrating primer, multi component 100% solids epoxy mortar, grout coat sealer and clear VOC compliant, aliphatic polyurethane non-reflective finish.
2. Decorative quartz broadcast systems will not be accepted. Steel trowel finish mortars only

B. Products: Subject to compliance with applicable fire, health, environmental, and safety requirements for storage, handling, installation, and clean up.

C. System Components: Verify specific requirements as systems vary by manufacturer. Verify mortar base product, build up layers of broadcast systems will not be accepted. Verify compatibility with substrate. Use manufacturer's standard components, compatible with each other and as follows:

1. Primer (Bond) Coat: Verify inclusion of primer in manufacturer's system.
   a. Resin: Epoxy.
   b. Formulation Description: 100% solids.
   c. Application Method: Apply by Squeegee and finish roller.
2. Mortar (Base) Coat: Verify mortar composition.
   a. Resin: Epoxy.
   b. Formulation Description: 100% solids, UV stable.
   c. Application Method: Screed and steel finish trowel.

1) Thickness of coat: Verify thickness as systems vary by manufacturer; approximately from 3/16 to 1/4 inch (4.76 to 6.35 mm).

d. Aggregate: Pigmented color quartz silica, and a minimum or 12% recycled glass aggregates integral component to mortar.

3. Grout Coat: Verify inclusion of base coat in manufacturer's system.
   a. Resin: Epoxy.
   b. Formulation Description: 100 percent solids, UV stable.
   c. Application Method: Flat squeegee and roller applied.
   d. Number of coats: (2) two, wet on wet application.
4. Top (Seal) Coat: Verify inclusion of water based aliphatic polyurethane sealer coat as systems vary by manufacturer.
   a. Resin: multi-component water based aliphatic polyurethane.
   b. Formulation Description: High UV stability, stain and mar resistant. LEED compliant low V.O.C.
   c. Application Method: Finish roller, dip into coating and back roll.
      1) Number of coats: (1) one
   d. Aggregates: Optional if needed verify inclusion of slip-retardant aggregates in sealer coat.

D. System Characteristics:
1. Color and Pattern: As indicated in Section 09 06 00, SCHEDULE OF FINISHES.
2. Integral cove base: 1 inch (25.4 mm) radius epoxy mortar cove keyed into concrete substrate. Verify cove base installation with manufacturer's system.
3. Overall System Thickness: Verify thickness as systems vary by manufacturer; between 3/16 inch (4.76 mm) and 1/4 inch (6.35 mm)
4. Finish: Standard anti-slip resistant to meet or exceed 0.06 dry; 0.08 wet.

E. Physical Properties:
1. Physical Properties of flooring system when tested as follows:

Property	Test	Value
Compressive Strength	ASTM C579	7,500 psi after 7 days
Volatile Organic Compound Limits (V.O.C.)	EPA & LEED	Below 100 g/l
Tensile Strength	ASTM C307	1,750 psi
Flexural Modulus of Elasticity	ASTM C580	2,800 psi
Water Absorption	ASTM C413	0.1%
Slip Resistance Index	ASTM F1679	0.81 dry and 0.56 wet. Minimal levels
Impact Resistance	ASTM D4226	> 160 in. lbs
Abrasion Resistance	ASTM D4060 Cs-17 wheel, 1000 cycles	0.06 gm maximum weight loss
Thermal Coefficient of Linear Expansion	ASTM C531	1.3x 10^{-5} mm/ °C mm
Hardness Shore D	ASTM D2240	85 to 90
Bond Strength	ASTM D7234	>300 psi 100% concrete failure
Chemical Resistance of the following: Betadyne stain resistance	ASTM D1380	No Effect
Acetic acid	5 percent	
Ammonium hydroxide	10 percent	
Citric Acid	50 percent	
Fatty acid Motor Oil, 20W		
Hydrochloric acid		
Salt water	10 percent	
Sodium Hydroxide		
Sulfuric acid	10 percent	
Trisodium phosphate	10 percent	
	5 percent	
Urine		
Feces		
Hydrogen peroxide	28 percent	
Distilled Water		
Sodium Hypochloride	5.28 percent	

2.2 BASE CAP STRIP

A. Aluminum, Extruded: ASTM B221, Alloy 6063-T6.

B. Shape for 5 mm (3/16 inch) depth of base material, "J" configuration.

C. Finish:

1. Finish exposed surfaces in accordance with NAAMM Metal Finishes Manual.
2. Aluminum: NAAMM Amp 500:
   a. Clear anodic coating, AA-C22A41 chemically etched medium matte, with Architectural Class 1, 0.7 mils or thicker.

b. Colored anodic coating, AA-C22A42, chemically etched medium matte with Architectural Class 1, 0.7 mils or thicker.

2.3 SUPPLEMENTAL MATERIALS

A. Textured Top Coat: Type recommended or produced by manufacturer of seamless resinous flooring system, slip resistance for desired final finish.

B. Joint Sealant: Type recommended or produced by resinous flooring manufacturer for type of service or joint conditioned indicated.

C. Waterproof Membrane: Type recommended or produced by manufacturer of resinous floor coatings for type of service and conditions as indicated in Drawings.

D. Provide a chemical resistant epoxy novolac top coat capable of resisting sustained temperatures up to 120°C (250°F).

E. Crack Isolation Membrane: Type recommended or produced by manufacturer of resinous flooring for conditions as indicated in Drawings.

F. Anti-Microbial Additive: Incorporate anti-microbial chemical additive to prevent growth of most bacteria, algae, fungi, mold, mildew, yeast, etc.

G. Patching and Fill Material: Resinous product of or approved by resinous coating manufacturer for application indicated. Resinous based materials only. Cementitious or single component product are not expectable.

PART 3 - EXECUTION

3.1 INSPECTION

A. Examine the areas and conditions where monolithic resinous flooring system with integral base is to be installed with the VA Resident Engineer.

B. Moisture Vapor Emission Testing: Perform moisture vapor transmission testing in accordance with ASTM F1869 to determine the MVER of the substrate prior to commencement of the work. See section 3.4, 3.

3.2 PROJECT CONDITIONS

A. Maintain temperature of rooms (air and surface) where work occurs, between 70 and 90 degrees F (21 and 32 degrees C) for at least 48 hours, before, during, and 24 hours after installation. Maintain temperature at least 70 degrees F (21 degrees C) during cure period.

B. Maintain relative humidity less than 75 percent.

C. Do not install materials until building is permanently enclosed and wet construction is complete, dry, and cured.

D. Maintain proper ventilation of the area during application and curing time period.

1. Comply with infection control measures of the VA Medical Center.

3.3 INSTALLATION REQUIREMENTS

A. The manufacturer's instructions for application and installation shall be reviewed with the VA Resident Engineer for the seamless resinous flooring system with integral cove base //and trench liner//.

B. Substrate shall be approved by manufacture technical representative.

3.4 PREPARATION

A. General: Prepare and clean substrates according to resinous flooring manufacturer's written instructions for substrate indicated. Provide clean, dry, and neutral Ph substrate for resinous flooring application.

B. Concrete Substrates: Provide sound concrete surfaces free of laitance, glaze, efflorescence, curing compounds, form-release agents, dust, dirt, grease, oil, and other contaminants incompatible with resinous flooring.

1. Prepare concrete substrates as follows:
   a. Shot-blast surfaces with an apparatus that abrades the concrete surface, contains the dispensed shot within the apparatus, and re circulates the shot by vacuum pickup.
   b. Comply with ASTM C 811 requirements, unless manufacturer's written instructions are more stringent.
2. Repair damaged and deteriorated concrete according to resinous flooring manufacturer's written recommendations.
3. Verify that concrete substrates are dry.
   a. Perform anhydrous calcium chloride test, ASTM F 1869. Proceed with application only after substrates have maximum moisture-vapor-emission rate of 5 lb of water/1000 sq. ft. (1.36 kg of water/92.9 sq. m) in 24 hours.
   b. MVT threshold for monolithic resinous Non - climatic flooring shall not exceed 5 lbs/1000 square feet (0.0001437 kPa) in a 24 hour period. MVT threshold for monolithic resinous climatic flooring shall not exceed 6 lbs/1000 square feet (0.0002155 kPa) over a 24 hour period.
   c. When MVT emission exceeds this limit, apply manufacturer's recommended vapor control primer or other corrective measures as recommended by manufacturer prior to application of flooring or membrane systems.
   d. Perform in situ probe test, ASTM F2170. Proceed with application only after substrates do not exceed a maximum potential equilibrium relative humidity of 75-80 percent.
   e. Provide a written report showing test placement and results.
4. Verify that concrete substrates have neutral Ph and that resinous flooring will adhere to them. Perform tests recommended by

manufacturer. Proceed with application only after substrates pass testing.

C. Resinous Materials: Mix components and prepare materials according to resinous flooring manufacturer's written instructions.

D. Use patching and fill material to fill holes and depressions in substrates according to manufacturer's written instructions.

E. Treat control joints and other nonmoving substrate cracks to prevent cracks from reflecting through resinous flooring according to manufacturer's written recommendations. Allowances should be included for flooring manufacturer recommended joint fill material, and concrete crack treatment.

F. Prepare wall to receive integral cove base :

1. Verify wall material is acceptable for resinous flooring application, if not, install material (e.g. cement board) to receive base.
2. Fill voids in wall surface to receive base, install undercoats (e.g. water proofing membrane, and/or crack isolation membrane) as recommended by resinous flooring manufacturer.
3. Install base prior to flooring if required by resinous flooring manufacturer.
4. Grind, cut or sand protrusions to receive base application.

3.5 APPLICATION

A. **General**: Apply components of resinous flooring system according to manufacturer's written instructions to produce a uniform, monolithic wearing surface of thickness indicated.

1. Coordinate application of components to provide optimum adhesion of resinous flooring system to substrate, and optimum inter-coat adhesion.
2. Cure resinous flooring components according to manufacturer's written instructions. Prevent contamination during application and curing processes.
3. At substrate expansion and isolation joints, provide joint in resinous flooring to comply with resinous flooring manufacturer's written recommendations.
   a. Apply joint sealant to comply with manufacturer's written recommendations.

B. Apply Primer: over prepared substrate at manufacturer's recommended spreading rate.

C. Apply cove base: Trowel to wall surfaces at a 1 inch radius, before applying flooring. Apply according to manufacturer's written instructions and details including those for taping, mixing, priming,

and troweling, sanding, and top coating of cove base. Round internal and external corners.

D. Trowel mortar base: Mix mortar material according to manufacturer's recommended procedures. Uniformly spread mortar over substrate using a specially designed screed box adjusted to manufacturer's recommended height. Metal trowel hand or plastic blade power trowel, single mortar coat in thickness indicated for flooring system, Pre fill or grout to fill substrate voids. When cured, scrape or lightly stone mortar base to remove left unbounded material.

E. Grout coat: Mix and roller apply the grout coats with strict adherence to manufacturer's installation procedures and coverage rates. (2) Two grout coatings to insure uniform coverage with wet on wet application.

F. Topcoat: Mix and roller apply the topcoat(s) with strict adherence to manufacturer's installation procedures and coverage rates.

3.6 TOLERANCE

A. From line of plane: Maximum 1/8 inch (3.18 mm) in total distance of flooring and base.

B. From radius of cove: Maximum of 1/8 inch (3.18 mm) plus or 1/16-inch (1.59 mm) minus.

3.7 CURING, PROTECTION AND CLEANING

A. Cure resinous flooring materials in compliance with manufacturer's directions, taking care to prevent contamination during stages of application and prior to completion of curing process.

B. Close area of application for a minimum of 24 hours.

C. Protect resinous flooring materials from damage and wear during construction operation.

1. Cover flooring with kraft type paper.
2. Optional 6 mm (1/4 inch) thick hardboard, plywood, or particle board where area is in foot or vehicle traffic pattern, rolling or fixed scaffolding and overhead work occurs.

D. Remove temporary covering and clean resinous flooring just prior to final inspection. Use cleaning materials and procedures recommended by resinous flooring manufacturer.

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